

REMARKS

The Office Action mailed October 24, 2006 has been reviewed and carefully considered. Claims 60, 66, and 105 have been amended. Claims 74 to 77 and 97 to 99 have been cancelled. Claims 60 and 88 are the independent claims. Reconsideration of the above-identified application, as amended, and in view of the following remarks is respectfully requested.

Applicants note with appreciation the indication of patentability of claims 71, 72, 73, 82 to 85, 95, 96, 104 and 105.

Independent claim 60 has been amended to recite that the average size of the pigment particles is in the range of 0.5 to 100 nm. Support for this limitation appears in the specification as originally filed on page 17, lines 7-9, and in original claim 1, last line.

Dependent claim 66 has been amended to recite that the web is treated with flocced aggregates of the pigment particles, the flocced aggregates having an average diameter less than 500 nm. Support for these limitations appears in the specification as originally filed on page 17, lines 9-11. Claim 66 narrows independent claim 60 because while claim 60 recites a size limitation for the pigment particles, claim 66 recites a size limitation for "flocced aggregates" of the pigment particles recited in claim 60.

Claim 66 was rejected under 35 U.S.C. § 112, ¶ 1, on the basis that the specification as originally filed purportedly does not disclose using flocked particles having an average size not larger than 100 nm. This limitation of dependent claim 66 is disclosed in the specification on page 17, lines 9 to 11. Withdrawal of this rejection is therefore requested.

In view of the cancellation of claims 74 to 77 and 97 to 99, the rejection of these claims under 35 U.S.C. § 112, ¶ 1, is now moot.

Claim 88 was rejected under 35 U.S.C. § 112, ¶ 2, on the basis that "elementary pigment particles" was allegedly not recited in the claim. The phrase "elementary pigment particles" is initially used in claim 88 at line 19 and then subsequently on line 20. Withdrawal of this rejection of claim 88 is therefore requested. In view of these comments, withdrawal of the rejection on this basis of dependent claims 89, 94 to 96, 100 to 105, 107 and 108 is requested.

The dependency of claim 94 has been appropriately amended. Withdrawal of the rejection of claim 94 under 35 U.S.C. § 112, ¶ 2, is therefore requested.

Claims 60 to 66, 74, 81, 88, 89, 91, 94, 97, 100 and 103 were rejected under 35 U.S.C. § 103(a) as being unpatentable over PCT Publication WO 98/11999 (“Ilmasti”) in view of U.S. Patent No. 5,320,897 (“Kondo”) and further in view of the cited article by Haylock.

Of these three references, Kondo is relied upon in the Office Action as reciting a size of pigment particles. However, the Office Action admits that Kondo discloses applying pigment particles to paper wherein the pigment particles have a size of 500 to 15,000 nm. (Office Action, page 7). The Office Action admits that the other references cited in the rejection do not disclose the particle size of the treating material. (Office Action, page 7). In view of the amendment to claim 60 that the pigment particles have an average size in the range of 0.5 and 100 nm, it is respectfully submitted that independent claim 60 is patentable over the cited prior art. Since independent claim 88 also recites that the elementary pigment particles have an average size in the range of 0.5 to 100 nm, it is respectfully submitted that independent claim 88 is patentable over the cited prior art. As the Office Action notes (page 7), Kondo discloses applying pigment particles having a size from 500 nm to 20,000 nm to paper using a polymeric binder. The particles disclosed by Kondo as being applied to the paper are formed of smaller single particles that are coagulated together so that they cannot be separated by normal dispersion forces. (Kondo, col. 4, line 46). Therefore, the actual particles applied to the paper have a size that remains within the range of 500 nm to 20,000 nm. (Kondo, col. 4, line 55), well outside the size range of independent claims 60 and 88. Since the invention as recited in independent claims 60 and 88 is directed to a coating that does not contain binder, the combination of Ilmasti, Haylock and Kondo does not disclose or suggest the claimed invention. The entirety of Kondo concentrates on how different kind of binders can be used with different pigments. Additionally, Kondo does not suggest or disclose applying its pigment particles without a binder, as recited in independent claims 60 and 88. Neither Ilmasti nor Haylock disclose or suggest anything about particle sizes of pigment materials. Consequently, a combination of Ilmasti and Haylock with Kondo does not result in binderless coating of any kind with a coating material having a particle size recited in independent claims 60 and 88. For these reasons, independent claims 60 and 99 are patentable over the prior art of record.

The pending dependent claims are patentable for the same reasons that independent claims 60 and 88 are patentable. Applicants respectfully submit that this application is in condition for allowance, and such action is respectfully requested.

Respectfully submitted,
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